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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,457	01/23/2002	Toshiya Yui	70432	6386

7590 01/31/2008

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EXAMINER	
MOK, ALEX W	
ART UNIT	PAPER NUMBER
2834	

MAIL DATE	DELIVERY MODE
01/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/055,457	YUI, TOSHIYA	
	Examiner	Art Unit	
	Alex W. Mok	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/ are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/15/08 has been entered.

Claim Objections

2. Claims 8, 9, and 17 are objected to because of the following informalities: in lines 10-11 of claim 8, the first engagement hole should belong to the brush arm, and the second engagement hole should belong to the holder, since this has been indicated earlier in the claim. Similar objections are also in claim 9. In claim 17, the term "first second modulus" should be corrected for coherency of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Laid-Open Application No.: S63-66054, and further in view of Uchino et al. (Japanese Patent Document No.: JP 11252869 A) and Mabuchi (US Patent No.: 4574215).

For claim 1, Japanese Laid-Open Application No.: S63-66054 (hereinafter JP '054) teaches a brush holder device comprising a brush including an integrally formed engagement portion (reference numeral 13, see figure 1); a brush arm (reference numeral 1) having an engagement hole formed therein (reference numeral 2), the engagement hole assuming substantially the same shape as that of the engagement portion of the brush (see figure 1), and the edges of the engagement hole constituting the brush arm brush contact portions;

and a holder (reference numeral 7) having an engagement hole formed therein (reference numeral 8) and holder brush contact portions formed via bending (see figure 1), the engagement hole assuming substantially the same shape as that of the engagement portion of the brush (see figure 1), said holder being fixed to said brush arm such that the engagement hole of said holder is aligned with the engagement hole of said brush arm (see figure 3), wherein said engagement portion of said brush is press-fitted into the engagement holes of said holder and said brush arm (see figure 3). JP '054 does not disclose the brush arm brush contact portions extending through the engagement hole of the holder, the holder brush contact portions formed on opposite edges in a longitudinal direction of the brush arm, nor the holder being made of a material having lower spring properties than the brush arm.

Uchino et al. disclose brush contact portions (reference numerals 2n, 2g) on each of the four sides of the engagement hole of the brush arm (see figures 1, 2).

It would have been obvious to have the brush arm brush contact portions extending through the engagement hole of the holder and also have the holder brush contact portions be on opposite edges in the longitudinal direction, since Uchino et al. already disclose brush contact portions on opposite edges in the longitudinal direction, and a person of ordinary skill in the art could have modified the holder of JP '054 to include the brush contact portions oriented in the longitudinal direction for the purpose of enhancing the rigidity of the device, and since Uchino et al. show brush contact portions extending upward on the brush arm, a person of ordinary skill in the art could combine this with the holder of JP '054 so that these brush contact portions of the brush arm can extend through the engagement hole of the holder for the purpose of better supporting the brush fitting into the engagement hole. It also would have been obvious to make the holder and brush arm have certain spring properties for the purpose of applying proper tension to the brush, and the invention of Mabuchi also discloses a brush arm having two strips, one of them being made of phosphor bronze which is highly resilient (see column 3, lines 26-36), i.e. having lower spring properties, and a person of ordinary skill in the art would have been able to include this technique taught by Mabuchi for the purpose of having proper tension for the brush.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '054 and Uchino et al. and Mabuchi as applied to claim 1 above, and further in view of Yoshida (US Patent No.: 4238703).

For claim 3, JP '054, Uchino et al. and Mabuchi disclose the claimed invention except for the fins on the holder formed through bending along opposite ends thereof, the ends being opposite along a longitudinal direction of the brush arm.

Yoshida teaches a brush device having opposite ends of the engagement hole being bent along a longitudinal direction (reference numerals 9b, 9c, see figures 10-11).

It would have been obvious to include fins on the holder, since the same process of bending the ends of the holder essentially forms the fins, and a person of ordinary skill in the art would have been able to include this configuration for the purpose of achieving high heat radiation effect.

6. Claims 4, 6, 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Laid-Open Application No.: S63-66054, and further in view of Uchino et al. (Japanese Patent Document No.: JP 11252869 A).

For claim 4, Japanese Laid-Open Application No.: S63-66054 (hereinafter JP '054) teaches a brush holder device comprising a brush including an integrally formed engagement portion having a first side, a second side, a third side, and a fourth side (reference numeral 13, see figure 1); a brush arm (reference numeral 1) having a defined engagement hole (reference numeral 2), said engagement hole having substantially the same shape as that of said engagement portion of said brush (see

figure 1), said brush arm including a first brush contact portion located at one edge defining said engagement hole and a second brush contact portion located at another edge defining said engagement hole, said first brush contact portion being opposite said second brush contact portion (see figure 1), said first brush contact portion and said second brush contact portion extending in a longitudinal direction of said brush arm (see figure 1); and a holder (reference numeral 7) having a defined brush receiving hole (reference numeral 8), said brush receiving hole having substantially the same shape as that of the engagement portion of said brush (see figure 1), said holder including a third brush contact portion located at an edge defining said brush receiving hole and a fourth brush contact portion located at another edge defining said brush receiving hole (see figure 1), said third brush contact portion being opposite said fourth brush contact portion in a longitudinal direction of said brush arm (see figure 1), said holder being connected to said brush arm such that said engagement hole aligns with said brush receiving hole (see figure 3), said engagement portion of said brush extending through said engagement hole and said brush receiving hole such that said first brush contact portion engages said first side of said brush, said second brush contact surface engages said second side of said brush, said third brush contact portion engages said third side of said brush and said fourth brush contact portion engages said fourth side of said brush, whereby said brush is connected to said holder and said brush arm (see figure 3). JP '054 does not specifically teach the first brush contact portion and the second brush contact portion of the brush arm extending through the brush receiving hole.

Uchino et al. disclose brush contact portions (reference numerals 2n, 2g) on each of the four sides of the engagement hole of the brush arm (see figures 1, 2).

It would have been obvious to have the brush contact portions extending through the engagement hole of the holder, since Uchino et al. show brush contact portions extending upward on the brush arm, a person of ordinary skill in the art could combine this with the holder of JP '054 so that these brush contact portions of the brush arm can extend through the engagement hole of the holder for the purpose of better supporting the brush fitting into the engagement hole.

For claim 6, JP '054 teaches a brush holder device comprising a brush including an integrally formed engagement portion (reference numeral 13, see figure 1); a first brush mounting element (reference numeral 1) having a defined engagement hole (reference numeral 2), said engagement hole having substantially the same shape as that of said engagement portion of said brush (see figure 1), said first brush mounting element including a first brush contact portion located at one edge defining said engagement hole and a second brush contact portion located at another edge defining said engagement hole, said first brush contact portion being opposite said second brush contact portion (see figure 1); and

a second brush mounting element (reference numeral 7) having a defined brush receiving hole (reference numeral 8), said brush receiving hole having substantially the same shape as that of the engagement portion of said brush (see figure 1), said second brush mounting element including a third brush contact portion located at an edge defining said brush receiving hole and a fourth brush contact portion located at another

edge defining said brush receiving hole (see figure 1), said third brush contact portion being opposite said fourth brush contact portion (see figure 1), said third brush contact portion and said fourth brush contact portion defining a longitudinal length of said brush receiving hole of said second brush mounting element, said first brush contact portion and said second brush contact portion of said first brush mounting element having a length corresponding to said longitudinal length of said brush receiving hole of said second brush mounting element (see figure 1), said second brush mounting element being connected to said first brush mounting element such that said engagement hole is in alignment with said brush receiving hole (see figure 3), said engagement portion of said brush extending through said engagement hole and said brush receiving hole such that said first, second, third and fourth brush contact portions are in direct contact with said engagement portion, whereby said brush is connected to said second brush mounting element and said first brush mounting element via said first, second, third and fourth brush contact portions (see figure 3). JP '054 does not disclose the first brush contact portion and the second brush contact portion extending through the brush receiving hole.

Uchino et al. disclose brush contact portions (reference numerals 2n, 2g) on each of the four sides of the engagement hole of the brush arm (see figures 1, 2).

It would have been obvious to have the first and second brush contact portions extending through the brush receiving hole, since Uchino shows the brush contact portions bent upward on the brush arm, and a person of ordinary skill can modify the first and second brush contact portions of JP '054 to include this technique of Uchino et

al. and have them extend through the brush receiving hole for the purpose of better supporting the brush fitting into the engagement hole.

For claim 14, JP '054 discloses the first brush contact portion and the second brush contact portion of said brush arm having a length corresponding to a longitudinal length of said brush receiving hole of said holder (see figure 1).

For claims 18 and 19, it would have been obvious to form the holder (i.e. second brush mounting element) with a thickness greater than that of the brush arm (i.e. first brush mounting element), since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

7. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '054 and Uchino et al. as applied to claims 4 and 6 above, and further in view of Yoshida (US Patent No.: 4238703).

For claims 5 and 7, JP '054 and Uchino et al. disclose the claimed invention except for the fins on the holder formed through bending along opposite ends thereof, the ends being opposite along a longitudinal direction of the brush arm.

Yoshida teaches a brush device having opposite ends of the engagement hole being bent along a longitudinal direction (reference numerals 9b, 9c, see figures 10-11).

It would have been obvious to include fins on the holder, since the same process of bending the ends of the holder essentially forms the fins, and a person of ordinary

skill in the art would have been able to include this configuration for the purpose of achieving high heat radiation effect.

8. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '054 and Uchino et al. as applied to claims 4, 6, and 14 above, and further in view of Mabuchi (US Patent No.: 4574215).

For claims 15-17, the inventions of JP '054 and Uchino et al. disclose the claimed invention except for the holder (i.e. second brush mounting element) being composed of a material having a first modulus of elasticity, the brush arm (i.e. first brush mounting element) being composed of another material having a second modulus of elasticity, and the first modulus of elasticity being greater than the second modulus of elasticity. It would have been obvious to have this configuration, since Mabuchi teaches a similar construction where two different materials are used for the brush holder, and one is more resilient, i.e. having a greater modulus of elasticity, than the other (see column 3, lines 26-36), and a person of ordinary skill would have been able to include this configuration for having proper tension for the brush.

9. Claims 8-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Laid-Open Application No.: S63-66054, and further in view of Mabuchi (US Patent No.: 4574215).

For claim 8, JP '054 teaches a brush holder device comprising a brush including an integrally formed engagement portion (reference numeral 13, see figure 1); a brush

arm (reference numeral 1) having a first engagement hole formed therein (reference numeral 2), said first engagement hole having substantially the same shape as that of said engagement portion of said brush (see figure 1); and a holder (reference numeral 7) having a second engagement hole formed therein (reference numeral 8), said second engagement hole having substantially the same shape as that of said engagement portion of said brush (see figure 1), wherein said holder is fixedly attached to said brush arm such that said first engagement hole of said holder is aligned with said second engagement hole of brush arm (see figure 3). JP '054 does not specifically teach the holder being made of a material having a first modulus of elasticity, the brush arm being composed of another material having a second modulus of elasticity, and the first modulus of elasticity being greater than the second modulus of elasticity. It would have been obvious to have this configuration, since Mabuchi teaches a similar construction where two different materials are used for the brush holder, and one is more resilient, i.e. having a greater modulus of elasticity, than the other (see column 3, lines 26-36), and a person of ordinary skill would have been able to include this configuration for having proper tension for the brush.

For claim 9, JP '054 discloses the brush arm including brush contact portions located at laterally opposite edges of said second engagement hole, and said holder including brush contact portions located at longitudinal opposite edges of said first engagement hole of said holder (see figure 1).

For claims 10 and 12, it would have been obvious to form the holder with a thicker sheet than that of the brush arm, since such a modification would have involved

a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

10. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '054 and Mabuchi as applied to claims 9 and 12 above, and further in view of Yoshida (US Patent No.: 4238703).

For claims 11 and 13, it would have been obvious to include fins on the holder for the same reasons given for claims 3, 5, and 7 above.

Response to Arguments

11. Applicant's arguments with respect to claims 1 and 3-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex W. Mok whose telephone number is (571) 272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alex W. Mok
Examiner
Art Unit 2834

AM